ABSTRACT OF THE DISCLOSURE

A method of forming bit line contact. A substrate has device and peripheral contact areas, with the device area having transistors including a gate electrode, a doped region, and a pair of barrier spacers formed on opposing sidewalls of two adjacent gate electrodes. A dielectric layer is formed overlying the substrate, and a contact formed through the dielectric layer, exposing the doped region. Finally, a conductive layer is formed as a bit line contact plug to fill the bit line contact.